Junior-Subordinated Capital Securities Markets

December 2021 Updates

Credit came roaring back in December after the blowoff last month. The news this month again centered on the Fed and its increasingly hawkish tone coming from its meeting this month. So, now that the Fed is going to be tapering faster, the remaining question is how much gap will it leave between the end of the taper and the first hike in the federal funds rate? According to Chairman Powell, the committee hasn't decided but he does not expect a long gap. Real rates on the front end of the curve (e.g., UST 5yr TIPS) ended the month unchanged at -1.66%; the 5yr implied breakeven inflation rate (i.e., the difference in yields between the 5yr UST and the 5yr Treasury Inflation Protected Security) rose 10bps to close at 2.91%. On the back end of the treasury curve, the 30yr bond closed yielding 1.90% (11bps higher) and the 10yr note closed yielding 1.51% (7bps higher) -- the yield differential between the two longer US treasuries steepened 4bps to +39bps, well under the wide +85bps set in February when the bond market was singularly fearful of higher inflation but not the coronavirus. The VIX (i.e., Chicago Board Options Exchange Volatility Index) collapsed by 37% to 17.22 as the S&P 500 made new highs again closing 4.36% higher at 4766. The credit markets received the equity rally with a holiday spirit by tightening across the board as financial conditions rose again to very solid ground.

Before we talk hybrids, let's look at performance in some of the more senior corporate credit sectors for comparative references on returns and yield changes:

- The junk market (measured by the ICE BofA High Yield ***h0a0*** index) rose 1. 88% to close yielding 4.32% (42bps lower).

- Global bank credit (measured by ICE BofA ***e0ba*** index) rose 0.01% to close yielding 1.96% (8bps higher).
- The BBB rated 5-10yr corporate sector (measured by ICE BofA ***c6a4*** index) rosel 0.14% to close yielding 2.56% (5bps higher).

Review of Market Structure:

The market for hybrids or **global junior-subordinated capital securities** (*i.e.,* "**Jsubs**") as we call them is comprised of two core sectors:

1. Preferred Securities, and
2. Contingent Capital Securities

Each sector has evolved with unique technical, structural, and fundamental features that are discussed and updated below:

Global junior subordinated capital securities are comprised of two sub-sets that represent a broad group of global junior-subordinated capital securities, which can be referenced by two ICE BofA indexes: 1) The ICE BofA US All Capital Securities Index (***i0cs***) and 2) The ICE BofA US Dollar Contingent Capital Index (***cdlr***).

Our litmus test for hybrids satisfies two core characteristics:

1) any non-payment of distributions would not accelerate an event of default (i.e., distributions are "junior-subordinated" to ordinary interest obligations) and,
2) balance sheet classification is something other than common stock under GAAP disclosure.

The US All Capital Securities (***i0cs***) benchmark of preferred securities represents $358 billion (face amount) of investment grade and below investment grade instruments in both the retail $25par market (37%) and the institutional $1,000par market (63%). The USD

Contingent Capital Index of US dollar denominated junior-subordinated capital securities ***(cdlr)*** represents $157 billion (face amount) of investment grade and below investment grade fixed-rate instruments with contractual triggers that could subordinate them to common stock in a reorganization that would not fall into a receivership after the bail-in. These two benchmarks combine for a $515 billion universe of fixed-rate junior-subordinated USD capital securities with preferred securities (measured by ***iocs***) being a 70% subset and contingent capital securities (measured by ***cdlr)*** being a 30% subset of the total global USD junior subordinated group.

Preferred Securities

In the preferred securities sleeve, there are four sub-component indexes in the US All Capital Securities Index (***i0cs)*** – this entire index is comprised of global "preferred securities". A **"preferred security"** can represent a capital security issued either through charter amendment (i.e., as a stock) or through indenture (i.e., as a bond) typically within the context of a "gone-concern" statutory authority (*e.g.,* US banks). As a gone concern, a company reorganization would be processed through a bankruptcy court. Preferred security payments are in priority to common stock dividends, yet can be deferred (i.e., payments are cumulative) or eliminated (i.e., payments are non-cumulative) without causing an immediate event of default; any principal loss absorption on a preferred security would be forced only *ex-post* through a statutory resolution in a bankruptcy proceeding.

The four sub-components of the *i0cs* benchmark that consolidate into the retail and institutional sectors of rated preferred securities are:

1. **ICE BofA Fixed Rate Preferred Index (*p0p1*) @ 42% *of i0cs***
   - Comprised of IG $25par and IG $1,000par (incl. US AT1)
     - The *p0p1* rose 2.00% this month to close yielding 2.74% (-57bps)
     - Headcount was down 3; face value declined by $.425billion

2. **ICE BofA US Capital Securities Index (*c0cs*) @ 23% of *i0cs***
    - <u>Comprised of dated IG $1,000par dated hybrids (excl. US AT1)</u>
        - The *c0cs* rose 0.40% this month to close yielding 3.25% (-3bps)
        - Headcount was up 1; face value rose by $1.539 billion
3. ***ICE BofA High-Yield Capital Securities Index (h0cs) @ 6% of i0cs***
    - <u>Comprised of BIG $1,000par legacy Tier1 and BIG $1,000par hybrids</u>
        - The *h0cs* rose 0.69% this month to close yielding 3.60% (+4bps)
        - Headcount was down 2; face value declined by $1.748 billion
4. **ICE BofA High Yield Fixed Rate Preferred Index (*p0hy*) @ 29% of *i0cs***
    - <u>Comprised of BIG $25par and BIG 1,000par (incl. US AT1)</u>
        - The *p0hy* rose 1.85% this month to close yielding 3.56% (-5375bps)
        - Headcount was down 2; face value rose by $0.203 billion

Overall, the ICE BofA All US Capital Securities Index (***i0cs***) rose 1.48% in December to close yielding 3.09%, which was 45bps lower than last month's closing yield and a spread of +194bps over comparable US Treasury securities (53bps tighter).

<u>Contingent Capital Securities</u>

A **"contingent capital security"** (i.e., a "CoCo") represents a capital security issued through indenture typically within the context of a "<u>going-concern</u>" type regulatory regime for banking, which would reorganize a potentially insolvent bank through the contracts of its capital before falling into a conservatorship proceeding. CoCos payments are non-cumulative and *pari passu* to common stock dividends and can be reduced or eliminated without causing an event of default. Principal loss absorption on a CoCo could be forced ex-ante through a regulatory action in advance of any bankruptcy proceeding (note that an actual bankruptcy may not happen because enough loss absorbing bail-in capital, including tier-2 capital, could be available through the "living will" of the entity's core capital). The ICE BofA USD Contingent Capital Index (***cdlr***) is comprised of US dollar denominated constituents (exclusively), which represent 61% of the mature master multi-currency benchmark (*coco*). We will utilize the USD benchmark (*cdlr*) as it more meaningfully reflects the contingent capital currency primarily held in our portfolios. The ICE BofA USD Contingent Capital Index (***cdlr***) rose 1.17% this month to close yielding 3.87%, which was 29bps lower from last month and a spread of +275bps over comparable US Treasury securities (40bps wider).

<u>Snapshot of Junior Subordinated Spread Sector Moves:</u>

Capital Securities Spread Value Matrix	p0p4	p0p4-e0ba	stb8	stb8-e0ba	cdlr	cdlr-e0ba
	(a)	(b)	(a)	(b)	(a)	(b)
	Retail	Retail	NoCo	NoCo	CoCo	CoCo
Sample Periods	03/31/2017 to Date		03/31/2017 to Date		03/31/2017 to Date	
Jr-Subs	***Absolute**	****Relative**	***Absolute**	****Relative**	***Absolute**	****Relative**
High	588	251	481	201	660	313
Low	-178	-267	175	55	223	143
Range	766	518	306	146	437	170
Average	39	-67	243	137	326	220
Stdev	119	103	47	28	63	35
Monthend	**70**	**-9**	**212**	**133**	**264**	**185**
Sector Spread Score[1]	0.41		-0.40		-0.99	
Last Month's Score[1]	1.11		0.14		-0.33	

1: Sector Spread Score = {[Monthend(a)-Ave(a)]/Stdev(a)+[Monthend(b)-Ave(b)]/Stdev(b)}/2

Monthend statistical position to average per unit of standard deviation

	p0p4 (a)	p0p4-e0ba (b)	stb8 (a)	stb8-e0ba (b)	cdlr (a)	cdlr-e0ba (b)
***Absolute**	0.26		-0.66		-0.98	
****Relative**		0.56		-0.14		-1.00

** Absolute = Option Adjusted US Government Spread*

*** Relative = spread to global financials measured by e0ba ICE Bond Index*

Monthend estimate of spread duration benefit (units of stdev.)

	p0p4	stb8	cdlr
Spread/mdurMat	-2.08	0.42	0.10
Probability Estimate to Spread Benefit	1.87%	66.39%	54.03%
		Memo: e0ba	0.21%

Source: Bloomberg, ICE Bond Indices

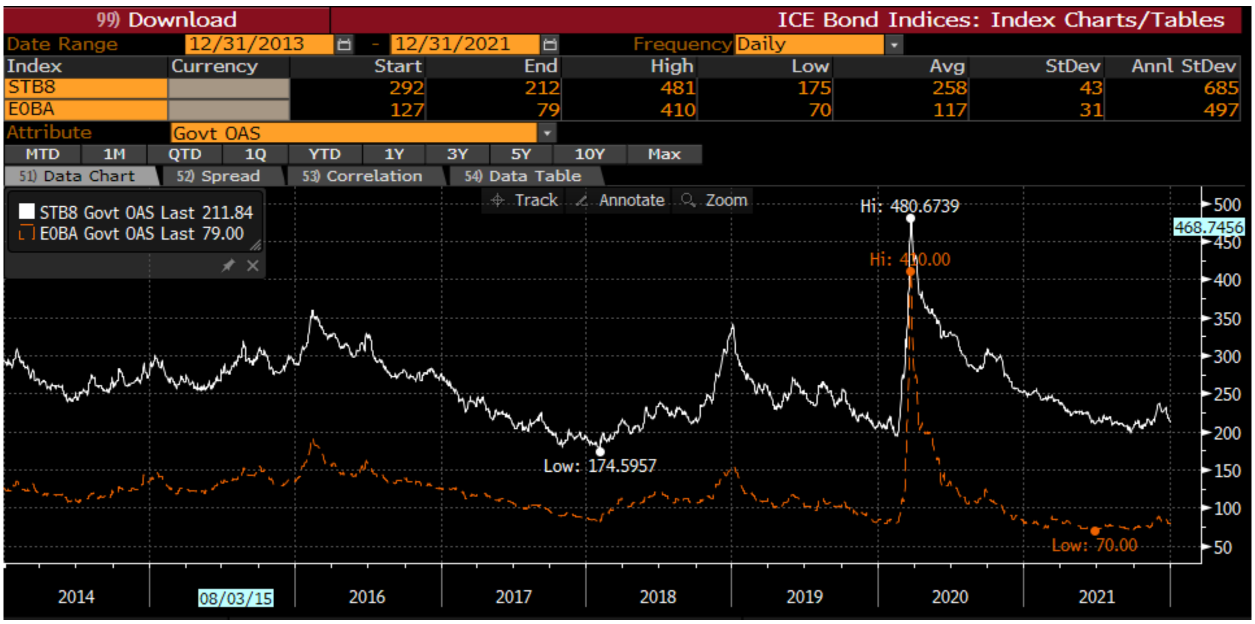
Implications of Market Activity:

$25par Retail Preferred Securities Sector

The retail preferred securities sector rose $2.17 in December to $105.83 based on the strength of equities and a bond market that basically yawned at the Fed's rising hawks. Equity performance and significantly lower volatility outweighed the "trivial" rise in longer term interest rates as the OAS in the retail sector dropped 79bps from the combination of higher retail prices and higher US treasury rates. The sector had an extraordinarily active year for refundings yet, despite the record low coupons, the sector shrank by $8.6 billion to $135.6 billion of face value at yearend. The par weighted coupon of the retail sector declined by 31bps to 5.47% in 2021, while the coupon for the 30yr US treasury sector rose by 25bps to 1.88%. Overall, the price risk to spread widening is still quite high because the duration to maturity is chronically high as the sector's coupon is chronically low compared to any prior year – this is simply a function of the fixed-for-life 5yr call options favoring issuers to redeem and replace at ever lower costs over the course of the year. So, if we factor out the call options and assume the low yield-to-calls are "false" and yield-to-perpetuity (or maturity) are true (i.e., more reflective of chronically elevating inflation), then the amount of potential spread benefit (to tighten in a rising rate environment) is worse this month as the lower z-score of 1.87% reflects – this can be interpreted as meaning that there a 48.13% probability that the dollar price should go down in order for there to be a 50/50 chance of duration risk in the retail sector being neutral on average. The retail sector's fair value declined when looking at OAS spreads. It is important to keep in mind that the higher sector spread score for retail paper is due to the sector's negative convexity; and the Z-score on spread duration is more reflective of the price risk relative to spread and can be more fairly compared the other sectors when considering dollar duration as either a risk or a benefit.

$1,000par Institutional Preferred Securities Sector

The $1,000 par institutional sector of the preferred securities market rose $0.50 in December. Relative values to more senior financials are marginally below average now as spreads on junior subordinated paper tightened more than on product up the capital structure. The chart below shows the option adjusted spread of NoCos (i.e., *stb8*: a custom weighted combination of ICE BofA's *cips* and *hips*) vs. Eurodollar Banking Index spread (i.e., *e0ba*) since 2013:



Source: Bloomberg

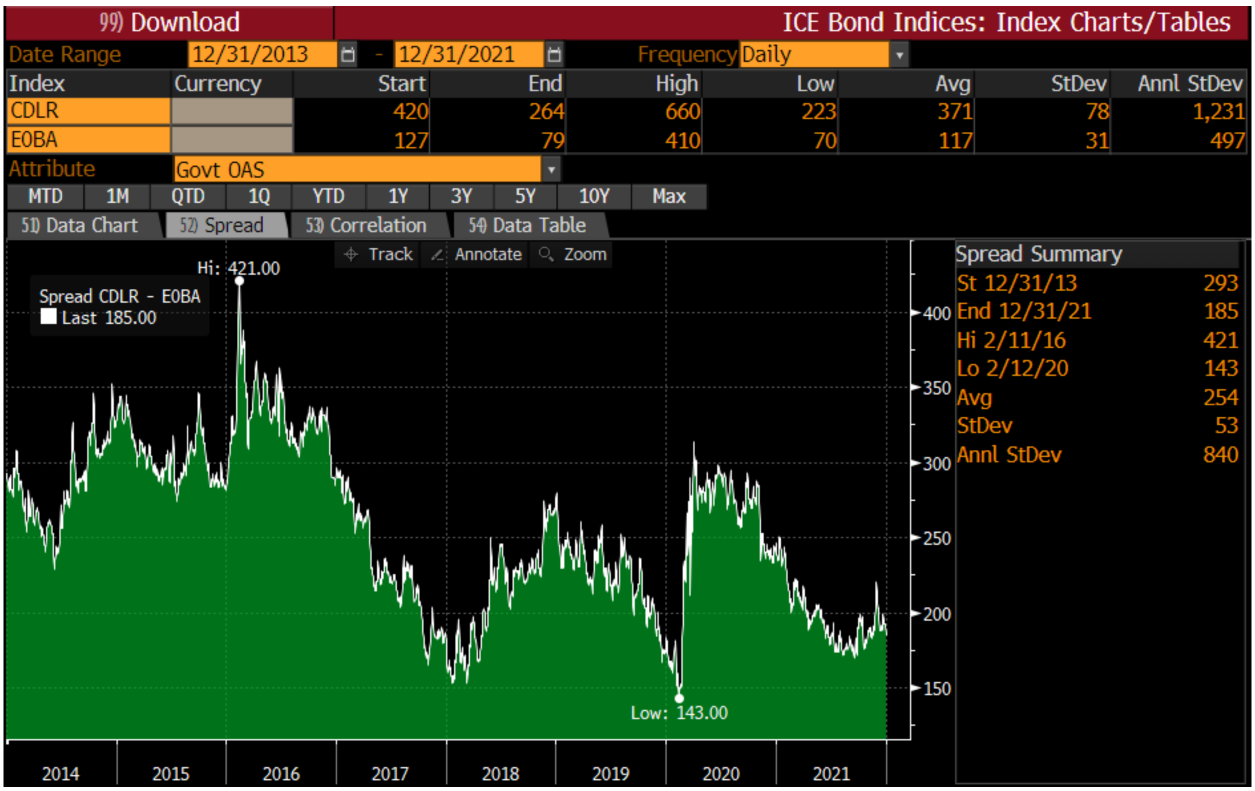
We look back to 2013 to include three intra-cycle sparks or shocks within the broader economic cycle from 2013's QE-III to 2020's QE-IV: 1) the aftermath (2014) of the bottom of QE3's Taper Tantrum (2013), 2) the commodity implosion and high yield (oil) market bust (2016) and 3) the market's revolt to the Fed's overshoot on rates (2018) – and now, the ongoing fear of and recovery from the COVID-19 pandemic and associated variants (2020+). NoCo spreads to comparable treasuries closed 25bps wider (+236). Relative to more senior financials, NoCos moved 13bps wider closing at +149bps; spreads for NoCos are 0.35 standard deviations more than average. As we have said, we expect the yield compression on junior subordination to more senior credit to continue grinding tighter though not without some disruption along the way from the excesses created by the Fed's massive balance sheet expansion and the uncertain risks that inflation will have to a rates policy lift-off now that the taper is underway – this month was one of those disruptions and the fear of the omicron variant exacerbated the move. From an historical relative spread perspective, the junior subordinated spread differential looks positioned similar to where it was in late 2016 as credit climbed out of the commodities crisis – the similarities to the Fed lift-off cycle appear on cue with 2016 as well as the Fed is now talking of advancing a lift-off with multiple moves up next year. We don't expect the Fed to raise the funds rate for at least a couple of months after the taper is complete – but the taper is going to be completed sooner now (i.e., by the end of March). Chairman Powell also said that he doesn't expect a long delay between ending the taper and initiating rate hikes which means a May hike is certainly on the table. The estimated probability of spread duration benefiting NoCo capital fell from 73.20% to 66.39% this month as yields declined and spreads tightened with the belly of the curve rising.

Contingent Capital Securities Sector

The CoCo sector rose $0.72 this month due primarily to the good mood engendered by the ECB and its persistent dovishness. European bank equity stocks rose during the last half of the month once investors learned that the ECB would by keeping the easy money flow by reinvesting its balance sheet for another 2yrs. According to President Lagarde's recent discussion on a lift-off, *"conditions are very unlikely to be satisfied next year...undue tightening of financial conditions is not desirable at a time when purchasing power is already being squeezed by higher energy and fuel bills, and it would represent an unwarranted headwind for the recovery."* European bank equities rose 7.1% in December which recovered half of the blow-off in November. Despite CoCos having a duration that is 0.8yrs lower than NoCos, the

CoCo sector outperformed NoCos due to spreads tightened by 40bps which was twice as much as in NoCo paper.

The graph below shows the spreads in CoCos (i.e., *cdlr*) relative to the spreads measured in Eurodollar bank credit that is not CoCo (i.e., *e0ba*) since the benchmark's inception (Dec-13) – note that CoCos were improved in 2016 after the Pillar-2 capital stack was redefined, thus reducing payment trigger risks for CoCos:



Source: Bloomberg

Since the 2015-2016 high spread zones reflected higher pre-Pillar-2 risks that weakened payment probabilities. But since then, Pillar-2 regulations have improved, loan quality is stable and core capital is much improved -- which leads us to conclude that this data sample over-tests extreme downside risks in CoCos given those fundamental improvements. It is important to note that we believe there to be an improved "normal" for CoCos since 2016 (one that not even the pandemic could break) because the subordination spread spike from the pandemic held to be 2 standard deviations lower than the spread spike in 2016 leading into the Pillar 2 reform.

This month, the relative OAS differential between CoCos and more senior financials tightened by 28bps with a difference of 185bps in favor of CoCos as the more senior sector tightened 8bps and the CoCo sector tightened 36bps. Despite the relative value opportunity in CoCos compared to more senior financials being below average (albeit, this is an over-risked average as discussed), the 185bps pickup still appears reasonable on a relative basis because of the sector's low default and low duration. The CoCo sector's spread score of -0.99 is the lowest of the three junior subordinated sectors, but 52bps of additional spread to NoCos (12bps less than last month) and 145bps of additional spread to retail preferred securities (6bps less than last month) still makes CoCos the best combination of spread and low duration of the three sectors. Importantly, the incremental yield available in the sector reflects the second-best probability estimate of spread benefit at 54.03% (down from 62.60% in November), which is still multiple times higher than what we estimate is available for more senior financials (*e0ba*). The implication here is that the defensive down in capital structure play in CoCos can still defend the goal with generous quality income.

Outlook:

There is no doubt that the Fed will need to assure markets that it will move quickly on its mandate for stable prices if inflation persists to be well above its desired track of 2%. Markets are not accustomed to the Fed raising rates for the wrong reason (i.e., to fight zooming inflation), which means that the Fed Put has probably expired for some time. The implication of this paradigm shift is that equity and bonds will have to reprice and clear valuations without liquidity being guaranteed by the Fed, but instead discovered by traders who are unaccustomed to the Fed being a dogged inflation fighter. Consequently, elevated equities are logically at risk of higher volatility in 2022 because human nature will want to keep what's been made over the last three years; and any associated risk-off episodes for hybrids should make for good buying opportunities this year. Deep negative real UST rates should rise because chronic negative rates are a signal of economic dysfunction and central bank inabilities -- in other words, if real UST 10yr rates stay negative for much longer than 2 ½ years, then we'd view that as a signal of economic weakness and central bank policy failure. Indeed, the Fed cannot be judged as a failure because it wouldn't be able to control (or bully) bond markets sufficiently to accomplish its dual mandate – especially after inflation had been its goal but is now its problem. It'd be illogical for the Fed to risk failure now that it has reached (and overshot) its inflation goal. To the contrary, it would be logical for the Fed to assure success by applying more brake pressure to its policy rate and using other means to push back (i.e., reverse twist) on second order effects that would follow -- like the curve's tendency to flatten to where a recession narrative makes the headlines and impedes the Fed's needed ongoing actions. No doubt, if one is to "never fight the Fed", then the Fed will need to prove to markets that it's still the world's biggest influencer and that it still has adequate tools available to achieve its desired outcome.

The overarching risk to our outlook is continued fear of the coronavirus and resultant lockdown drag on global economies. This ongoing fear explains why the UST yield curve is already significantly flatter now than before prior rate hike cycles. We believe that if the coronavirus fears can clear, then global supply chain clogs can clear too in time which should (bear) steepen the UST yield curve and give the Fed more runway to effectively use its tools to better combat inflation – this is our base case; and for any interim wider spread opportunities to be bought with enough breadth for spreads to close tighter by the end of 2022. Ultimately, our investment theme is focused on helping to keep the money that's been made -- thanks in large part to the Fed's pandemic response. Junior subordinated capital securities offer a constructive quality income and capital preservation opportunity as shown here:

	A	B	C	D=B/C	E=D/A	F	G=E/(1-F)
Capital Preservation (Purchasing Power) Matrix: Financials	**Mdur**	**YTW%**	**5yrBE Inflation%**	**Inflation Coverage**	**Inflation Coverage/ Mdur**	**Probability Estimate to Spread Benefit**	**Capital Preservation Score**
Retail $25par (p0p4)	3.51	2.61	2.90	0.90	0.26	1.87%	**0.26**
NoCos (stb8)	4.25	3.44	2.90	1.19	0.28	66.39%	**0.83**
CoCos (cdlr)	3.41	3.88	2.90	1.34	0.39	54.03%	**0.85**
More Sr. Fins (e0ba)	5.45	1.96	2.90	0.68	0.12	0.21%	**0.12**

Both Noco and CoCo nominal yields more than cover the 5yr breakeven inflation rate implied in the US treasury market and have the highest capital preservation scores for the hybrid sectors and the more senior component of the corporate capital stack.

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